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***Commonwealth Actuarial Valuation of Liabilities for
"Postemployment Benefits Other than Pensions"
prepared in accordance with GASB Statement 45***

The Commonwealth's has received the "Postemployment Benefits Other than Pensions Actuarial Valuation as of January 1, 2006" (OPEB) for Commonwealth employees, retirees and survivors. The complete report can be found [here](#).

For the Commonwealth, these liabilities are the costs of retiree health care, group term life insurance and dental/vision benefits. This valuation was performed by actuaries at Aon with significant assistance from the Group Insurance Commission (GIC), the Public Employees Retirement Administration Commission (PERAC) and my office. As you know, in fiscal year 2008 the Governmental Accounting Standards Board (GASB) Statement 45 specifies that the Commonwealth must include detailed disclosures in its financial statements on this liability and the status of any actions the Commonwealth has taken to fund the liability. While private sector financial statements have included this liability for some time, it is new to governments.

This is the first time the Commonwealth has calculated this liability. Considering this and the fact that few states have preceded us in this calculation, we used three guiding principles as we made judgments on how to calculate the liability:

- We selected assumptions that we believe were middle of the range of options and believe overall we achieved a mid-range valuation.
- Where an actuarial assumption is common to both the pension valuation and OPEB valuation, we attempted to choose the value or assumption used in the pension valuation.
- For significant assumptions or decision points, we asked the actuaries to provide a sensitivity analysis on how changes in the assumptions would affect the valuation.

Principal Valuation Results-Page-7

The Commonwealth's liability is \$13.287 billion, assuming no pre-funding of costs. This translates into an annual required contribution (ARC) of \$1.062 billion for this valuation. The annual contribution is projected to climb to an estimated \$2.758 billion in FY2016 under this current valuation.

Assuming the Commonwealth decides to fund its ARC in a vehicle that is an irrevocable trust, similar to the Commonwealth Pension Liability Reserve, this liability drops to \$7.562 billion. This change is entirely due to the increase in the rate of assumed return on investments used in the irrevocable trust versus the free cash rate assumed. If funded, the ARC would also drop to \$702.9 million. Using the trust, contributions are expected to increase to an estimated \$1.205 billion if the Commonwealth decides to fund the ARC. In both cases, these amounts are triple and double, respectively of the current GIC expected retiree benefit premiums of approximately \$335.5 million for FY2006.

Methods and Assumptions-Page 30

Significant assumptions that were used as part of this valuation include:

- GASB 45 stipulates a “closed” valuation – assuming that as of January 1, 2006, a snapshot is taken and no employees are hired after current employees leave service.
- The census only includes Commonwealth employees and their survivors. Authorities and municipalities who may use GIC for health care coverage, will have to perform their own valuations, as the Commonwealth only acts as an agent for those entities and does not assume the risk or financial burden for their health care costs.
- For the rates of return for unfunded plans, GASB 45 stipulates a long-term view of short-term interest rates. For the unfunded calculation, we reviewed the historical return of the Massachusetts Municipal Depository Trust (MMDT). Though rates have been trending higher recently, we assumed a 4.5% return. For the funded assumption, we assumed 8.25%, similar to what is used in PERAC’s valuation.
- For the health care cost trend rate, Aon reviewed GIC’s claims history and analyzed health care cost trends in industry. After discussion, the valuation uses rates that start at 10.5% and gradually trend down to an ultimate rate of 5% beyond 2017.
- Administrative expenses are assumed to increase at 5% per year. Standard mortality and morbidity tables were used. Salaries are assumed to increase at 4.5% per annum.

Both Aon and Deloitte, the Commonwealth’s independent auditor, agreed that these assumptions were reasonable.

For budgeting purposes, we asked Aon to provide 10 year payout projections, which are analogous to a funding schedule. This amortization component of the payout projections increases at a rate of 4.5% per year. This is also similar to what PERAC uses for its valuations.

Sensitivity Analysis-Page 15

We asked Aon to perform a sensitivity analysis. The funded and unfunded discount rates described above offer a sensitivity analysis of the effect of the discount rate on the liability. In addition we asked the actuary for a sensitivity analysis on changes to the trend rate assumed for health care costs and the effect of changes in the employee contribution rate. Results were as follows:

		Health Care Costs	
	As Calculated	1% increase	1% decrease
Unfunded Liability	\$13.287 billion	\$15.8841 billion – 19.5%	\$11.2819 billion – (15.1%)
ARC	\$1,062.1 million	\$1,321.7 million – 24.4%	\$868.1 million – (18.3%)
Funded ARC	\$7.5615 billion	\$8.6226 billion – 14.0%	\$6.6995 billion – (11.4%)
ARC	\$702.9 million	\$822.1 million – 17.0%	\$608.4 million – (13.4%)

The results of the employee contribution changing from 15% to 25% would cause a drop in the liability by \$1.6 billion for the unfunded liability and \$889 million for the funded liability. Changes in the ARC would be a drop of \$124 million (unfunded) and \$83 million (funded), respectively.

Conclusion

The report includes complete details on these assumptions as well as a summary of the GIC health care plan including enrollees, benefits and costs (page 20) as well as a plain English explanation of GASB 45 (page 43).

This analysis needs to be performed at least biennially under the accounting standards.

Sincerely yours,

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Any questions? Send e-mail to: comptroller.info@state.ma.us.

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